

Appln. No. 09/840,193
Amendment dated February 13, 2006
Reply to Office Action of November 23, 2005

REMARKS/ARGUMENTS

Reconsideration of the present application, as amended, is respectfully requested.

The November 23, 2005 Office Action and the Examiner's comments have been carefully considered. In response, claims are amended and added, and remarks are set forth below in a sincere effort to place the present application in form for allowance. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

PRIOR ART REJECTIONS

In the Office Action claims 2-5, 8 and 33-34 are rejected under 35 USC 102(e) as being anticipated by USP 6,335,980 (Armato, III et al.). Claims 6 and 7 are rejected under 35 USC 103 as being unpatentable over Armato, III et al. in view of USP 6,493,458 (Yasui et al.).

In response, claim 33 is amended to more clearly define the present claimed invention over the cited references. In addition, claim 35 is added to provide a different scope of protection for the invention.

The present claimed invention as defined by amended claim 33 is directed to a radiation image processing apparatus which identifies a contour of a radiographed body part and determines

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which one of a plurality of predetermined-different contour types corresponding to a plurality of different kinds of body parts such as a chest, an abdomen and a leg, the radiographed body part belongs (see Figs. 6-8 of the present application).

In order to attain the above function, the radiation image processing apparatus includes:

an object region extracting section that receives a set of two-dimensionally-arranged radiation image data including radiation image data of the radiographed body part and extracts an object region formed by the radiation image data of the radiographed body part from the set of two-dimensionally-arranged radiation image data; and

a contour recognizing section having contour type classification criteria data for each of the plurality of predetermined-different kinds of body parts, which recognizes a contour of the extracted object region, and determines to which one of the plurality of different contour types the recognized contour belongs based on the data of contour type classification criteria.

USP 6,335,980 (Armato, III et al.) teaches a method for the automated segmentation of the lung regions in a lateral chest radiograph.

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Armato, III et al. only disclose a chest among body parts, and do not disclose, teach or suggest a structure to determine which one of a plurality of predetermined-different contour types corresponding to a plurality of different kinds of body parts (such as a chest, an abdomen and a leg) the radiographed body part belongs.

In rejecting the present claimed invention, the Examiner references Armato, III et al. at col. 5, lines 39-64 and a table of categories shown in Fig. 6.

As can be seen from Fig. 6, Armato, III et al. merely teach anatomic regions as ROI (regions-of-interest) in lateral chest radiographs, but do not teach a contour recognizing section for determining one of a plurality of different kinds of body parts such as a chest, an abdomen and a leg.

At col. 5, lines 39-64, Armato et al. teach a location category of the anatomic regions shown in Fig. 6, but do not teach contour type classification criteria data for each of the plurality of predetermined-different contour types corresponding to the plurality of different kinds of body parts.

Armato, III et al. merely teach a structure to obtain a final contour of lung regions from its initial contour (see the Abstract of Armato, III et al.). Consequently, the structure recited in claim 33 to determine to which one of the plurality of

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different contour types the recognized contour belongs based on the data of contour type classification criteria, would not have been obvious to one of ordinary skill in the art at the time of the invention was made based upon the teaching of Armato, III et al.

That is, the present claimed invention as defined by claim 33 is patentable over Armato, III et al. because the reference does not disclose, teach or suggest:

a contour recognizing section having contour type classification criteria data for each of the plurality of predetermined-different contour types corresponding to the plurality of different kinds of body parts, which recognizes a contour of the extracted object region, and determines to which one of the plurality of different contour types the recognized contour belongs based on the data of contour type classification criteria (see claim 33, lines 13-20).

In view of the foregoing, claim 33 is patentable over Armato, III et al. under 35 USC 102 as well as 35 USC 103.

None of the other references of record close the gap between the present claimed invention as defined by claim 33 and Armato, III et al. Therefore, claim 33 is patentable over all of the references of record under 35 USC 102 as well as 35 USC 103.

Claims 2-9 and 34 are either directly or indirectly dependent on claim 33 and are patentable over the cited references in view of their dependence on claim 33 and because

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the references do not disclose, teach or suggest each of the limitations set forth in claims 2-9 and 34.

NEW CLAIM

New claim 35 is added to the present application. New claim 35 further defines and limits the invention of claim 33 by stating that the plurality of predetermined-different contour types include a square type, a rectangular type and a barrel type. None of the references of record disclose, teach or suggest the limitation recited in claim 35.

Claim 35 is patentable over the cited references in view of its dependence on claim 33 and because the references do not disclose, teach or suggest the limitations set forth in claim 35.

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Entry of the claim amendments, allowance of the claims, and the passing of this application to issue are respectfully solicited.

If the Examiner disagrees with any of the foregoing, the Examiner is respectfully requested to point out where there is support for a contrary view.

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If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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